ISSN 2231-1629
Knowledge Resonance

IMPACT FACTOR 8.072
January - June 2021- Vol. 10 No. 1

IMPORTANCE OF TEXTILE WASTE UTILIZATION – A REVIEW

Mrs. Rekha B. Lonikar
Asst. Prof. Home Science
Kai. Bapusaheb Patil Ekambekar
College, Udgir.

Dr. Anjali Kaware
Prof. & HOD, Home Science Shri Shivaji
college of Arts Commerce
& Science Akola.

★★★

Abstract - New textile products are introduced in the world market and with the increased purchasing power among consumers; more textiles are dumped after their life cycle. Increased amount of textile create the proportionate amount of textile waste which need to be recycled for both economical and environmental reasons. According to Wang et al, textile waste is mainly classified into two types: pre consumer Waste and post-consumer waste. According to Guldmann E., the circular economy model is to expand the lifespan of a product via repair, reuse, remanufacturing and recycling. In the present paper, studies of impact of textile waste on Environment, economy, reuse and recycling are reviewed.

Keywords: - Textile waste, Pre-consumer, Post-consumer, Recycling.

Introduction – The world population has grown tremendously in the past few decades and the same period also witnessed improvement in living standard in general.

These two developments have augmented the consumption of textile which in turn increased the textile production (Wang Y, 2006). Every year a minimum of thousands of new textile products are introduced in the world market and the increased purchasing power among consumers, more textiles are dumped after their life cycle. Increased amount of textile create the proportionate amount of textile waste which need to be recycling for both economical and environmental reasons.

Waste management practices can differ for developed and developing Nations, for urban and rural areas and for residential and industrial manufacturers or producer. Textile waste products are gathered from different sources and are then sorted and processed depending on their condition, composition and resale value. The fact is that all sorts of cloth can be given a second life after consumers discard them. Usually the collected garments from the scrap yard or from the landfill are sorted and graded as natural, synthetic and blended fabrics before opting for recycling process. Textile recycling is the process of recovering fiber yarn for fabric and reprocessing the textile material into useful products. The end results of this processing can vary from the production of energy and chemical to new article and clothing.

Textile waste is mainly classified into two types - pre consumer waste and post-consumer waste

1) Pre consumer Waste - It is also called manufacturing waste and clean waste. These are the waste generated during the processing of fiber (natural, synthetic), and fabric (woven, knitted, non woven) and garments. Fiber lint, rejected yarn during spinning, faulted fabric during manufacturing, fabric and garment trims during garment manufacturing and rejected garments during production comes under this category.

2) Post consumer waste - It is also called household waste and dirty waste. These are the waste generated after any worn out, damaged and out of fashion apparel and textile product which is discarded and no longer is in use by the wearer. Post consumer textile wastes are sometimes given to charities but more typically are disposed off into the trust and end up in Municipal landfills. (Wang, et al, 2003)

Growing attention to environmental responsibility, public policy interests and aggressive promotion of recycling are some of the motivating factors among consumers to think about lesser generation of waste products and there proper channeling to landfills (Domina et.al, 1999).

Many industries and Research Institutes have taken this concept on a prime importance and trying to find out more and effective alternative especially in developed nations. Even industries are keen to search and produce eco friendly products followed by strict environment related government policies to save the nature. (Prerna Jain et.al., 2016).

Major issues facing the recycling efforts to textile and apparel manufacturers are lack of market for recycled products and cost for processing. (Grasso, 1995).

Sorting and recycling of textiles suffer from system cost and inefficiency. The current market for recyclable textile and clothing are limited. Also sorting of textiles is very expensive and it is time and labour intensive. (Sherburne, 2009).

The basis of the circular economy model is to expand the lifespan of a product via repair, reuse, remanufacturing and recycling, so that resources are used more efficiently and the need for new products and Virgin raw material is reduced or ideally eliminated. (Guldmann E., 2016).

With growing attention to environmental responsibility towards solid waste management, the textile and apparel industry has expanded its effort to reduce disposal of post producer textile waste in landfills. (Tanya Domina & Kathy Koch, 2016).

Zamani have compared the potential of greenhouse gas (GHG) emission and energy saving of the textiles incineration with different recycling techniques using life cycle assessment. He has found that the textile recycling has a much higher potential of green house gas emission and energy savings. (Zamani et.al., 2016).

Conclusion :- In the present paper the studies of impact of textile waste on Environment, economy, reuse and recycling are reviewed.

To do the textile waste management in the future, the knowledge of the subject must reach the people. For this it is necessary to create awareness about the environmental damage and economic damage caused by the textile waste. The textile industry can help a lot for this by using recycled textile waste. Due to which people can learn the importance of recycling. This leads to reuse and recycle of textile waste for making the eco-friendly environment.

Adopting and effectively implementing extended producer responsibility policy for pre and post consumer textile waste can improve the collection and recycling rates as well as identify solution for current and future challenges.

References:-

1) *Guldmann E. Best practice examples of circular business models. Denmark: The Danish Environmental Protection Agency; 2016. P. 56. ISBN: 978-87-93435-86.*

2) *Grasso, M. (1995) Recycled textile fibers: The challenge for the twenty-first century. Textile Chemist and Colorist, 27(5), 16-20.*

3) *Mohammad Abdullatif Bukhari, Ruth Carrasco-Gallego and Eva Ponce-Cueto (2018) Developing a national programme for textiles and clothing recovery: Waste Management & Research, Vol. 36(4)321-331 https://journals.sagepub.com/doi/full/10.1177/0734242X18759190*

4) *Shen B, Wang Y, Lo C, Shum M. The impact of ethical fashion on consumer purchase behavior. Journal of Fashion Marketing & Management. 2012; 16(2):234-245. DOI: 10.1108/13612021211222842*

5) *Sherburne A (2009) Achieving sustainable textiles: a designer's perspective. In: Blackburn RS (ed) Sustainable Textiles: Life Cycle and Environmental Impact. New York: Woodhead.*

6) Tanya Domina, Kathy Koch (2016), The Textile Waste Lifecycle: Clothing and Textile Research Journal. ctr.sagepub.com

7) Textile Waste: Status and Perspectives DOI: http://dx.doi.org/10.5772/intechopen.92234

8) Wang Y, editor. Recycling in Textiles. 1st ed. Cambridge: Woodhead Publishing; 2006. P. 248. ISBN: 9781855739529

9) *Zamani B, Svanstrom M, Peters G, et al. (2015) A carbon footprint of textile recycling: a case study in Sweden. Journal of Industrial Ecology 19: 676-687.*